
Introduction

The Basic Alternate Route Selection (BARS) and Network Alternate Route Selection (NARS) features enable a customer with a number of Meridian 1 systems in different locations to create a private telecommunications network (shown in [Figure 1](#)). The BARS or NARS features direct a call from a Meridian 1 in one geographical location to a Meridian 1 in any other geographical location in a cost-efficient and easy-to-use manner by:

- eliminating long, complex dialing plans and replacing them with an abbreviated Uniform Dialing Plan (UDP) common to all Meridian 1s that are part of the network
- providing a means of controlling the number and types of trunks that are available to each network caller and a method of controlling the time of day that access to a trunk (or group of trunks) is allowed
- automatically selecting the least-cost trunk route available to complete a call between network switches
- providing uniform network access to stations served directly at a Meridian 1 Node and stations served at Meridian 1 Mains or Conventional Mains connected to a Meridian 1 Node by TIE trunks
- providing the call originator with the option to accept or refuse call completion over an expensive trunk, if less expensive trunks are not currently available
- providing optional queuing features that enable a call originator (when all trunks are busy) to:

remain off hook until a trunk becomes idle, or

hang-up and receive a call back from the Meridian 1 when a trunk becomes idle.

Whether the BARS or NARS feature is used depends on the quantity and placement of Meridian 1s within the customer's private network, as well as the volume of traffic the network is to carry. NARS has the ability to translate location codes while BARS translates codes used for on-net dialing as Special Numbers. Refer to the section titled ["Automatic on-net to off-net overflow"](#) on page 25.

When used in large, widely-dispersed applications, NARS forms an integral part of Northern Telecom's Electronic Switched Network (ESN) product. For more complete details, refer to *Electronic Switched Network description*.

Document overview

This document describes BARS/NARS, including the following elements:

- Network access codes
- Uniform dialing plan (UDP)
- Dialing transparency
- Automatic least-cost routing
- Digit manipulation
- Time of Day (TOD) routing
- Routing control
- Network controls:
 - Network Class of Service (NCOS)
 - Traveling Class of Service (TCOS)
 - Facility Restriction Level (FRL)
 - Class of Service (COS)
- Digit manipulation, translation, restriction, and recognition:
 - 1-4 digit translation and 1-7 digit restriction (X11 Release 4)
 - 1-4 digit translation, 1-7 digit restriction, and 1-7 digit recognition (X11 Release 5)
 - 1-11 digit translation, restriction, and recognition (X11 Release 8)

- Free Calling Area Screening (FCAS)
- Expensive Route Warning Tone (ERWT)
- Interchangeable Numbering Plan Area
- Carrier Access Code
- Flexible Numbering Plan

It also includes sections on implementing BARS and NARS.

Terminology

Terminology used in this publication is based on the following definition of switch types:

Meridian 1 ESN Node

A Meridian 1 equipped with the NARS or BARS feature.

Meridian 1 ESN Main

A Meridian 1 connected by TIE trunks to a Meridian 1 Node and equipped with the Network Signaling (NSIG) feature package. The connected Meridian 1 Node must also be equipped with the NSIG feature package.

Conventional Main

A Meridian 1 switch connected by TIE trunks to a Meridian 1 Node, but not equipped with the Network Signaling feature package. Conventional Main also applies to any other switch type (for example, step-by-step) connected by TIE trunks to a Meridian 1 Node.

Other documentation

Other optional features that enhance the capabilities of BARS or NARS (such as Off-Hook Queuing and Network Authorization Codes) are mentioned briefly in this publication. The following publications describe these optional features:

Network Queuing description,

Coordinated Dialing Plan description,

Basic and Network Authorization Code description,

Flexible Numbering Plan description, operation, and administration

Figure 1
A typical private telecommunications network

